CLAIMS

1. A admixture machine for infusion, which is used for admixture preparation predetermined does of a liquid form drug to be administrated to a patient and a diluent, comprising:

an information input unit for inputting predetermined information involving data concerning at least the body surface area, the area under the plasma drug concentration curve (AUC) or the body weight of the patient;

a liquid delivery amount calculation unit for determining the does of a liquid form drug and the amount of a diluent which are both to be delivered based upon the information inputted through the information input unit and calculating the delivery does of the liquid form drug and the diluent based upon the determined amounts thereof;

a guide unit for inserting a mixing tube which provides channels of the liquid form drug and the diluent; and

liquid delivery units which are in contact respectively with a liquid form drug channel through which the liquid form drug flows and a diluent channel through which the diluent flows in the mixing tube to be inserted into the guide unit and thus deliver the liquid form drug and the diluent based on the delivery does of the liquid form drug and the diluent as determined in the liquid delivery amount calculation unit.

2. The admixture machine for infusion according to claim 1, wherein the predetermined information to be inputted to the information input unit further comprises a name of a patient for medication; the admixture machine for infusion further comprises a memory unit capable of recording at least the name

of the patient, the body surface area, the AUC or the body weight of the patient in association with one another; and upon input of a name of a patient into the information input unit, at least the body surface area, the AUC or the body weight in association with the inputted patient name is called for by reference to the memory unit, and automatically inputted to the information input unit.

3. The admixture machine for infusion according to claim 1 or 2, wherein the predetermined information to be inputted to the information input unit further comprises the body surface area of the patient for medication, the AUC, the body weight, the name of a liquid form drug to be administrated, the does of the liquid form drug, and the does of the liquid form drug per unit body surface area or per body weight of the patient with respect to the liquid form drug or the does of the liquid form drug determined based upon the AUC, and the calculation unit automatically calculates the value of the does of the liquid form drug based upon at least the body surface area, the AUC or the body weight of the patient inputted to the information input unit, and the admixture machine for infusion further comprises a memory unit that is capable of recording the name of the liquid form drug and the does of the liquid form drug per unit body surface area or per weight or the does of the liquid form drug determined based upon the AUC in association with one another and a warning unit which compares the does of the liquid form drug individually inputted from the information input unit with the value of the does of the liquid form drug automatically calculated in the calculation unit, and, when the difference is greater than a predetermined value, gives warning.

4. The admixture machine for infusion according to claim 3, wherein the memory unit further records at least one piece of information selected from application and medication methods.

5. The admixture machine for infusion according to claim 1 or 2, wherein based upon information given from the information input unit, the calculation unit automatically calculates the does of the liquid form drug and the amount of the diluent to be supplied.

6. The admixture machine for infusion according to any of claims 1 to 5, wherein with respect to the inputting process of the body surface area or the AUC of the patient, by inputting parameters required for calculating the body surface area or the AUC, calculations are automatically carried out through predetermined operation expressions based upon these parameters so that the results are automatically inputted.

7. The admixture machine for infusion according to any of claims 1 to 6, further comprising:

a bar-code reading unit which is capable of inputting at least one portion of pieces of information to be inputted to the information input unit by reading bar codes.

8. The admixture machine for infusion according to any of claims 1 to 6, further comprising:

a signal receiving unit which is capable of inputting at least one portion of pieces of information to be inputted to the information input unit by using IC tag signals.

9. The admixture machine for infusion according to any of claims 1 to 8, further comprising:

a memory-card reading unit which is capable of inputting at least one portion of pieces of information to be inputted to the information input unit by reading a memory card.

10. The admixture machine for infusion according to any of claims 1 to 9, wherein a printing device, which is capable of printing at least one portion of pieces of information to be inputted to the information input unit on a pasting label, is prepared in a connectable state.

11. The admixture machine for infusion according to any of claims 1 to 10, further comprising:

a flow meter for measuring the amount of flow passing through a mixing tube to be inserted to the guide unit,

wherein the amount of flow, measured by the flow meter, is compared with the amount of liquid delivery calculated by the calculation unit so that the amount of liquid delivery is controlled through a feed-back controlling process.

12. The admixture machine for infusion according to any of claims 1 to 11, wherein the liquid form drug is an anti-tumor drug for infusion.

13. The admixture machine for infusion according to any of claims 1 to 12, wherein the mixing tube to be inserted to the guide unit of the admixture machine for infusion is branched into a tong shape, that is, a tong structure having one of branched

ends serving as a liquid form drug channel to be connected to a liquid form drug container for packing a liquid form drug, the other end serving as a diluent channel to be connected to a diluent container for packing a diluent, and the branch portion serving as a mixing channel in which the liquid form drug channel and the diluent channel are joined to each other, and the guide unit of the admixture machine for infusion is formed into a tong shape to which the tong-shaped mixing tube is inserted.

14. A mixing tube, which is the mixing tube to be used in the admixture machine for infusion according to any of claims 1 to 13, having:

a structure branched into a tong shape, that is, a tong structure having one of branched ends serving as a liquid form drug channel to be connected to a liquid form drug container for packing a liquid form drug, the other end serving as a diluent channel to be connected to a diluent container for packing a diluent, and the branch portion, in which the liquid form drug channel and the diluent channel are joined to each other, serving as a mixing channel to be connected to a mixing container for packing the mixed solution of the liquid form drug and the diluent.

15. The mixing tube, which is the mixing tube to be used in the admixture machine for infusion according to any of claims 1 to 13, wherein the mixing tube comprises a liquid form drug channel one end of which is connected to a liquid form drug container for packing a liquid form drug and a diluent channel one end of which is connected to a diluent container for packing a diluent individually, with the other ends of the channels being connected to a mixing container for packing a mixed solution

of the liquid form drug and the diluent.

16. The mixing tube according to claim 14 or claim 15, wherein the mixing tube comprises a liquid form drug container connecting port to be connected to a port of the liquid form drug container at an end of the liquid form drug channel and a diluent container connecting port to be connected to a port of the diluent container at an end of the diluent channel, with the liquid form drug container connecting port being formed into a shape that is only connectable to the liquid form drug container.

17. The mixing tube according to any of claims 14 to 16, wherein the liquid form drug container connecting port of the mixing tube comprises a securing member used for securing the port of the liquid form drug container.

18. A liquid form drug container, which is the liquid form drug container to be used in the admixture machine for infusion according to any of claims 1 to 13, comprising: a discharging outlet that is connected to a liquid form drug container connecting port placed at an end portion of the liquid form drug channel, and is placed at the port of the liquid form drug container.

19. The liquid form drug container according to claim 18, wherein liquid form drugs that have been primarily diluted are contained in the liquid form drug container in a plurality of amounts to be applied.

20. The liquid form drug container according to claim 18,

wherein undiluted liquid form drugs are contained in the liquid form drug container in a plurality of amounts to be applied.

21. The liquid form drug container according to claim 18, comprising:

a liquid form drug packing unit for packing the liquid form drug, and

a primary diluent packing unit for packing a primary diluent that is used for primarily diluting the liquid form drug,

wherein a communicating unit, which is used for mixing the liquid form drug and the primary diluent, is placed between the liquid form drug packing unit and the primary diluent packing unit.

22. The liquid form drug container according to claim 21, wherein the liquid form drug container is a plastic bag having two chambers separated by an easily-peelable seal, with one of the chambers packing an undiluted liquid form drug or unreconstituted injectable drug and the other chamber packing a primary diluent.

23. The liquid form drug container according to claim 18, wherein the liquid form drug container comprises a connecting unit, placed at a position virtually opposing to the port of the liquid form drug container, which allows transfer with another liquid form drug container.

24. The liquid form drug container according to claim 23, wherein the connecting unit is provided with a double-sided needle.

25. A mixing container, which is used in the admixture machine for infusion according to claims 1 to 13, wherein the mixing container is integrally formed with the mixing tube.

26. A admixture preparation system comprising the admixture machine for infusion and the mixing tube according to any of claims 1 to 13,

wherein the mixing tube to be inserted to the guide unit of the admixture machine for infusion has a structure branched into a tong shape, that is, a tong structure having one of branched ends serving as a liquid form drug channel to be connected to a liquid form drug container for packing a liquid form drug, the other end serving as a diluent channel to be connected to a diluent container for packing a diluent, and the branch portion, in which the liquid form drug channel and the diluent channel are joined to each other, serving as a mixing channel to be connected to a mixing container for packing the mixed solution of the liquid form drug and the diluent; and the guide unit of the admixture machine for infusion comprises at least a liquid form drug channel insertion unit to which the liquid form drug channel is inserted and a diluent channel insertion unit to which the diluent channel is inserted.

27. A admixture preparation system of infusion comprising the admixture machine for infusion and the mixing tube according to any of claims 1 to 13,

wherein the mixing tube to be inserted to the guide unit of the admixture machine for infusion comprises a liquid form drug channel that is connected to a liquid form drug container

for packing a liquid form drug and a diluent channel that is connected to a diluent container for packing a diluent, with one end of the liquid form drug channel being connected to the liquid form drug container and one end of the diluent channel being connected to the diluent container; and the guide unit of the admixture machine for infusion comprises at least a liquid form drug channel insertion unit to which the liquid form drug channel is inserted and a diluent channel insertion unit to which the diluent channel is inserted.

28. The admixture preparation system of infusion according to claim 26 or claim 27, wherein the mixing tube to be inserted to the guide unit of the admixture machine for infusion is integrally formed with the admixture machine for infusion.

29. The admixture preparation system of infusion according to claim 26 or claim 27, further comprising:

a container weight-measuring unit which allows controls on the does of the liquid form drug and the diluent by feeding back weight changes in the diluent container or the mixing container.

30. A admixture method of infusion in which a admixture machine for admixture preparation predetermined does of a liquid form drug to be administrated to a patient and a diluent is used, comprising the steps of:

inputting predetermined information involving data concerning at least the body surface area, the area under the plasma drug concentration curve (AUC) or the body weight of the patient to the admixture machine for infusion;

allowing the admixture machine for infusion to determine

the does of a liquid form drug and the amount of a diluent which are both to be delivered based upon the inputted information, and also to calculate the delivery does of the liquid form drug and the diluent based upon the determined amounts thereof; and

based on the delivery does of the liquid form drug and the diluent that have been calculated, allowing liquid delivery units, formed at a guide unit for inserting a mixing tube which provides channels of the liquid form drug and the diluent to the admixture machine for infusion, to respectively contact with the liquid form drug channel forming a channel for the liquid form drug and the diluent channel forming a channel for the diluent in the mixing tube so that the liquid form drug and the diluent are respectively delivered.